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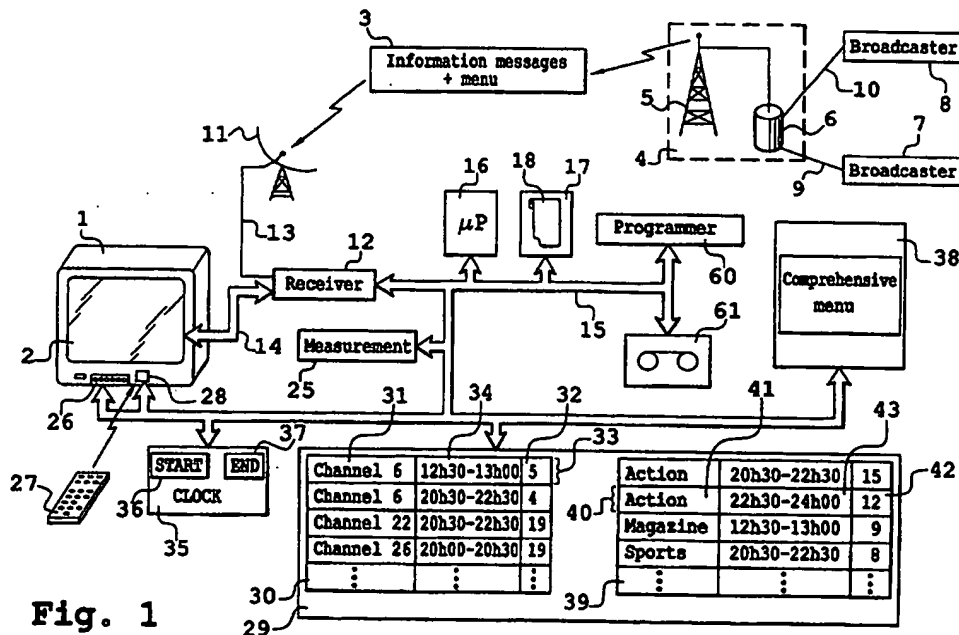
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(54) Abstract Title

Adaptive programme guide based on an automatically generated user profile

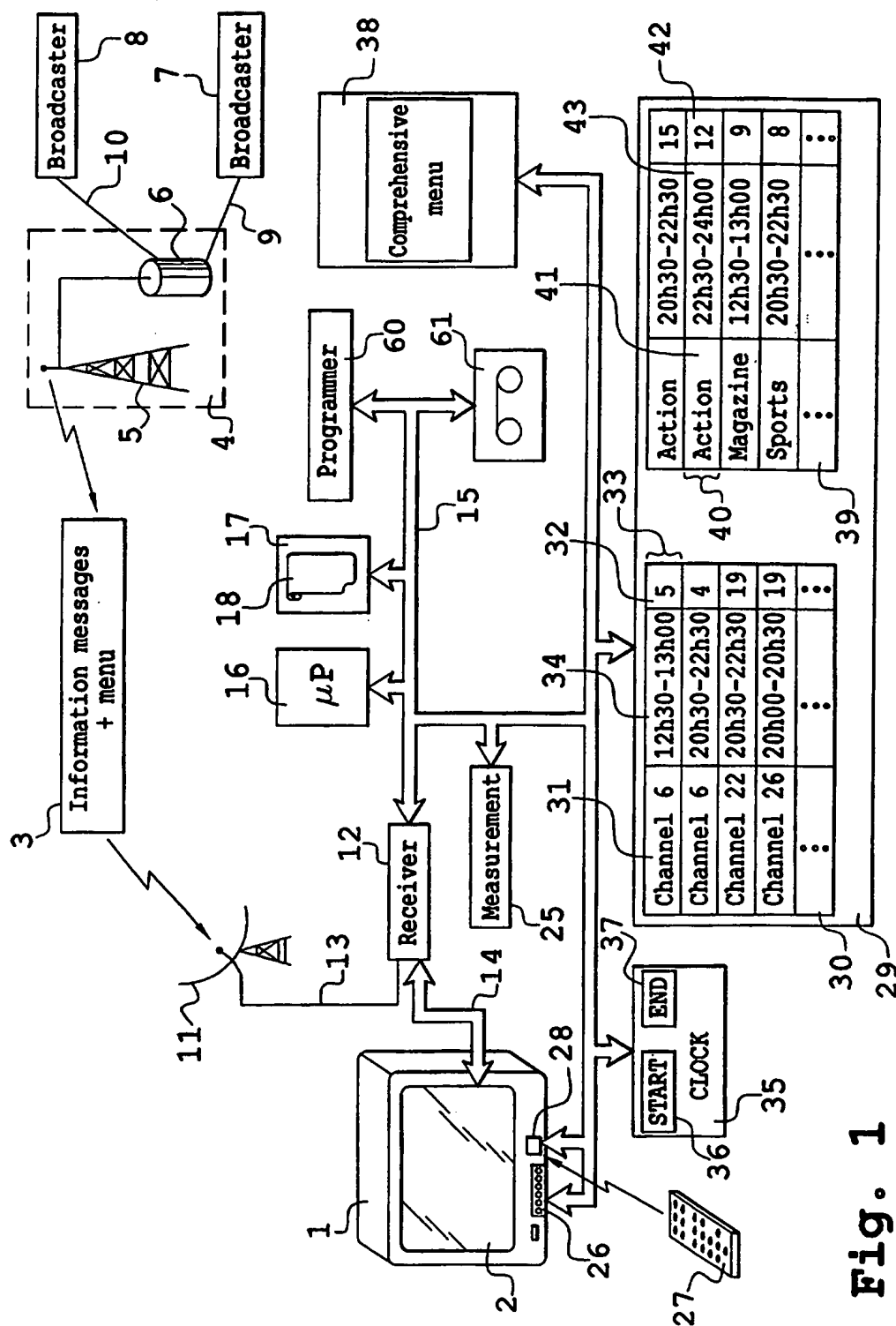
(57) To manage a display on a screen (2) of a television set (1), a customised menu of information messages (3) to be viewed is produced. This menu is customised according to a sociocultural profile of a user. This sociocultural profile is determined in the television set (1) through a learning process that is a function of information messages (3) previously selected by the user. This learning process consists in memorising weighted criteria pertaining to these previous selections in a back-up memory (29). These criteria are used to produce a filtering list (30, 39) designed to remove, from a choice menu, all the choices that do not correspond to the user's sociocultural profile.

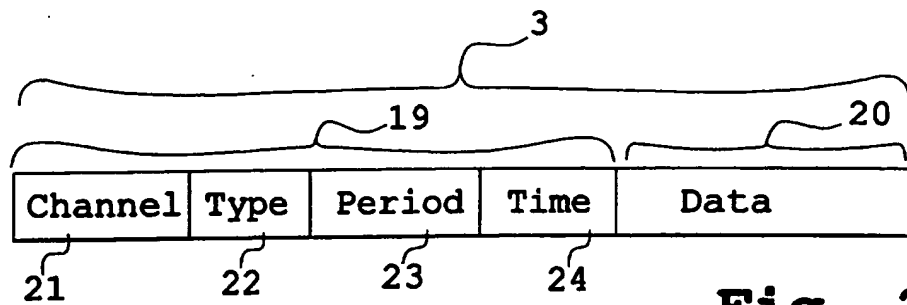
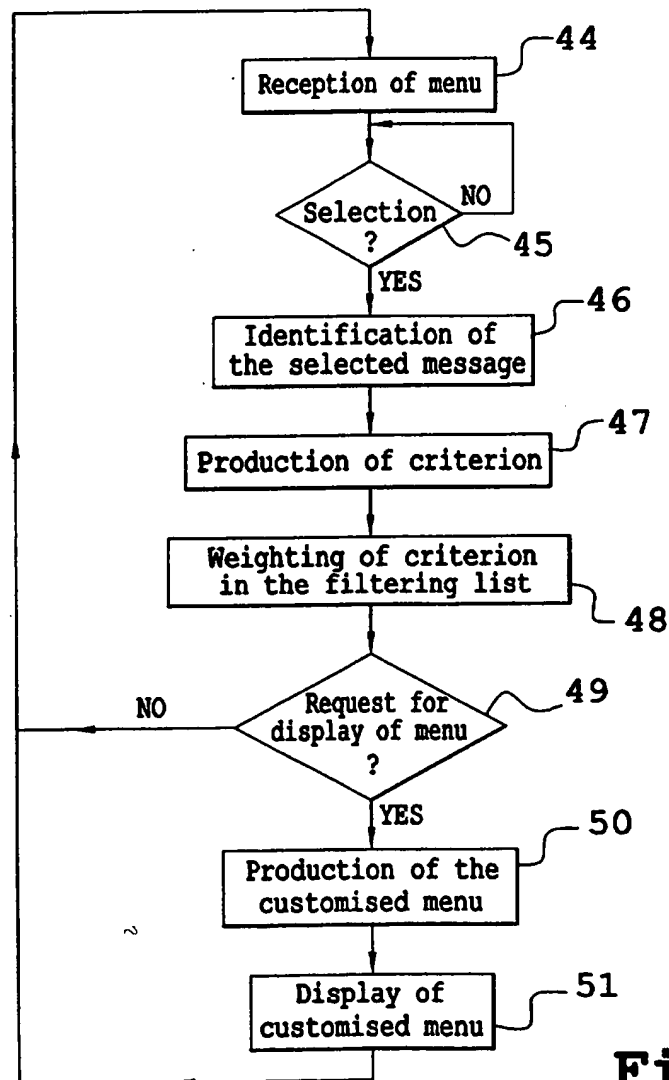


At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

This print takes account of replacement documents submitted after the date of filing to enable the application to comply with the formal requirements of the Patents Rules 1995

GB 2 354 902 A



**Fig. 2****Fig. 3**

METHOD FOR THE MANAGEMENT OF A DISPLAY ON A SCREEN OF A
TELEVISION SET, USE OF THIS METHOD AND TELEVISION SET
WORKING ACCORDING TO THIS METHOD

5 An object of the invention is a method for the management of a
display on a screen of a television set. An object of the invention is also a
television set working according to this method. It can be applied to all types
of television sets capable of receiving information messages to be viewed.
More generally, the invention can be applied to any device comprising at
10 least a television screen as in a computer or any other device capable of
displaying and receiving transmitted information to be viewed. This
information is generally received by means of a radioelectric link or a wire
link with an information message provider. The information messages
include television shows, especially films, documentaries and newscasts.
15 These information messages also include a message concerning a
comprehensive menu comprising information, especially scheduled times for
broadcasting information messages. The purpose of the invention is to
reduce the quantity of information to be displayed, present in a
comprehensive menu, as a function of a user's sociocultural parameters
20 defined in the television set. These sociocultural parameters are used to
identify a sociocultural profile of a user.

At present, there are known display management methods in which
the selection parameters are chosen by the user himself or herself. These
choices are purely subjective and depend on the user's mood when making
25 the choice. This leads the user to make fairly frequent changes in his choice
of preferred selection parameters.

A display management method of this kind has problems. Indeed, the
time taken to modify selection parameters in order to view time schedules of
desired programs and/or programs broadcast at desired times lowers the
30 performance of a method of this kind. Thus, a type of programme that the
user wishes to view at a given time is not necessarily the same as the type of
programme that he will wish to view later. Indeed, it may happen that the
user who watches television in the morning and evening will want to watch a
show in the morning and an adventure film in the evening. Thus, setting the
35 parameters to take account of a time slot constraint as well as the user's

mood during this time slot appreciably complicates this type of method.

It is an object of the present invention to overcome these problems by proposing an automatic method for the management of a display of information to be viewed on a television screen. This display management method is a constant learning method. Indeed, in the invention, any piece of information selected for viewing on a television screen is identified by means of a measurement device and interpreted as a sociocultural criterion. As the selections are made one after the other, the method creates a list of criteria that it updates after each new selection. This list of criteria is used to determine a sociocultural profile of a user of this television screen and thus for the selection, in a comprehensive menu containing a multitude of information elements to be viewed and associated time slots, of the information messages whose identification corresponds to the user's sociocultural profile.

A user's sociocultural profile can be used to define his habits with respect to information viewed with his television set. Indeed, this profile provides knowledge of the time slots during which the user is in front of his television screen or, at least, it is known that these are time slots during which the television screen is active and on which a selected programme is displayed. Furthermore, with this sociocultural profile of the user, there are known types of selected information messages such as an action film, a science fiction film, a magazine, the transmission of a sports event or any information message that can be viewed on a television screen, each information message being individually identifiable. With this sociocultural profile, it is also possible to determine channel numbers that are favourites because they are the ones most frequently selected. An information message broadcaster is associated with each channel number.

An object of the present invention therefore is a television set receiving information messages to be viewed that are individually identifiable by an identifier and receiving a comprehensive menu message to be viewed pertaining to time schedules for the broadcasting of an information message, characterized in that it comprises a device for the identification of an information message selected by a user, a device to measure a sociocultural profile of the user by audience rating measurement on the basis of a reading of the contents of the identifier of each selected message, and in that it

comprises a back-up memory for a filtering list, whose length is variable on request, corresponding to this profile and enabling a preferred menu to be prepared from the comprehensive menu in choosing only time schedules for broadcasting information messages, one type of which corresponds to the user's sociocultural profile.

Audience rating measurement is a measurement of the watching time that a user is willing to devote to a show.

An object of the invention is also a method for the management of a display on a screen of a television set, wherein :

- a multitude of messages to be displayed is received in the television set, these messages being possibly individually identifiable by an identifier,
- at least one message corresponding to a comprehensive menu is displayed, this comprehensive menu comprising information on broadcasting characteristics of a message to be viewed,
- characterized in that:
 - a message to be viewed is selected,
 - a qualification of the selected message is produced, the qualification being done by means of a set of contents of the identifier and/or a time schedule information element and/or a channel number by means of which the selection message is broadcast and/or an information element contained in the selected message,
 - a filtering list comprising one or more qualifications is saved in a back-up memory, each qualification being associated with a weighting coefficient, a number of qualifications in the filtering list being adjustable on request,
 - a qualification is weighted as a function of a number of selected messages possessing this qualification,
 - a customised menu is produced, preferably from the comprehensive menu, in selecting indications, possibly corresponding to an identifier, whose contents meet a qualification of the filtering list,
 - the customized menu is displayed on the screen of the television set as a replacement of the comprehensive menu.

The present invention will be understood more clearly from the following description and the appended figures. These figures are given purely by way of an indication and in no way restrict the scope of the

invention. Of these figures:

- Figure 1 exemplifies a television set used to implement the method of the invention,

- Figure 2 exemplifies a symbolic structure of a message received and reshaped by the receiver

- Figure 3 shows a view, in the form of an algorithm, of an exemplary operation of the method of the invention.

Figure 1 shows a television set 1 according to the invention. This television set 1 has a television screen 2 whose main function is to display information messages 3 to be viewed. These messages 3 are sent by a transmission device 4. The link between the television set 1 and the device 4 is a link that is generally either a radioelectric or a wire link, using mainly optic fibbers or coaxial cables. In the case of a radioelectric link, the device 4 has a radiating device 5 such as an antenna 5, connected to an information device 6. This device 6 has chiefly means (not shown) for the transmission, by means of the antenna 5, of messages 3. Furthermore, the device 4 sends messages 3 from a broadcaster 7 and/or a broadcaster 8 with which it is connected by a symbolic link 9 and/or 10 respectively. The transmission device 4 may be positioned in a piece of equipment on the ground or in a satellite. In the latter case, the links 9 and 10 are chiefly radioelectric links. The device 4 thus centralizes all the messages proposed by the broadcasters 7 or 8 or others.

The television set 1 receives messages 3 on an antenna 11, for example a parabolic antenna. The television set 1 has a receiver 12 connected firstly to the antenna 11 by a link 13 generally formed by a coaxial cable and secondly to the screen 2 by a link 14 or again a bus 14. The receiver 12 is furthermore connected to a data, address and control bus 15. This bus 15 is furthermore connected to a microprocessor 16 and to a programme memory 17 comprising a programme 18. The microprocessor 16, with the help of the programme 18, has the main function of controlling and seeing to the efficient flow of information on the bus 15 and more generally between the different elements in the television set 1.

In a preferred example, the messages 3 received by the antenna 11 are made up of digital signals.

Figure 2 exemplifies a symbolic baseband structure of a message 3

received and reshaped by the receiver 12. Thus, a message 3 has an identification field 19 and a data field 20. The field 19 is divided into several sub-fields 21 to 24 respectively specifying a channel on which the message 3 is broadcast, a representative type of message 3, a period in which a set of contents of the field 20 has been produced and a time at which the message 3 has been sent by the device 4, namely a broadcast starting time. In one variant, the sub-field 24 specifies a time slot during which the message 3 is broadcast or again a remaining duration of broadcasting. The field 20 represents the information (the film, newscast or the like) to be viewed. This structure is only an example. Indeed, it is possible to consider temporarily superimposing the field 19 and the field 20. For this purpose, each field is associated for example with a sub-carrier having a different frequency. Thus, an identification channel conveying a set of contents of the field 19 will be associated with a data channel conveying a set of contents of the field 20. Thus, in this variant, data on the message 3 and more specifically data relating to the field 20 to be displayed on the screen 2 may be sent in a continuous flow, namely uninterruptedly due to the transmission of the field 19. In this case, the message 3 may be identified at any time.

The television set 1 in Figure 1 comprises a measurement device 25. This device 25 has the function of picking up a piece of information corresponding to a piece of information given by the identification field 19 or the field 20 of information to be viewed. The device 25 thus measures a sociocultural characteristic of a user. Indeed, among the messages 3 received by the antenna 11, the user selects a preferred message 3. To make this selection, the user uses a keyboard 26 present on a face of the television set 1 and/or a remote control unit 27, an associated sensor 28 of which is placed on one face of the television set 1. The keyboard 26 and the sensor 28 are connected to the bus 15. The microprocessor 16, using a piece of information received by the sensor 28 or the keyboard 26, controls the receiver 12 which selects a channel number requested by the user.

The device 25 picks up a set of contents of the field 19, namely contents of the fields 21 to 24. This picking up of contents is thus used to qualify the selected message 3. A qualification provides knowledge of a channel on which the selected message 3 is broadcast or a type of information element associated with this message 3 or a period or a date at

which a set of contents representing the information present in the field 20 has been produced and a calendar information element. Or again, the qualification represents the type of message: a sports transmission, newscast or the like. The device 25 produces a criterion from the contents of a field 21 to 24. For example, in the case of the field 21 relating to a channel, a set of contents of this field giving a channel number is read. This channel number is a first criterion. Thus, a criterion is identified with a qualification or with several combined qualifications.

The television set 1 has a back-up memory 29. The microprocessor 16 saves a filtering list 30 in the memory 29. This list 30 has several fields, for example two. A first field 31 has a piece of information on the criterion produced by the device 25. A second field 32 associated with the field 31 is used to associate a weighting coefficient with this field 31. A field 31 and a field 32 are associated to form a line 33. There are as many lines as there are criteria. A weighting of the criterion is done whenever a measurement of the device 25 produces a criterion identical to the criterion present in the field 31. In a preferred example, this weighting consists of an incrementation of a value of the weighting coefficient in the field 32.

In a preferred embodiment, a line of the list 30, such as the line 33, comprises a third field 34. This field 34 refines the criterion of the field 31.

In a preferred example, the field 34 comprises a piece of information pertaining to a time slot during which a user has viewed a message 3 on the screen 2, a qualification of this message 3 by the device 25 having led especially to the criterion of the field 31. In this case it is possible to complement the indication of the time slot by a calendar information element. To obtain a value of a time slot, several solutions can be considered. A first solution consists in carrying out a pre-designation of the different time slots possible, i.e. in a preferred example designating time slots with a duration of about 30 minutes. To obtain a time slot as in the field 34, the starting time of the time slot during which the viewed message 3 has been selected and the ending time of the time slot during which the message 3 has been interrupted are taken. To do this, the television set 1 has a clock 35. In a preferred example, the clock 35 has a first back-up register 36 for a starting time of a time slot and a second register 37 for the end of this time slot. The clock 35 furthermore gives a continuous temporal information element. In

this preferred example, a set of contents of the registers 36 and 37 are updated, namely with a starting time and an ending time corresponding to a subsequent time slot, when a temporal information element is equal to the information saved in the register 37. The clock 35 has means (not shown) to internally manage this updating. A sub-division of the time into time slots of about 30 minutes, rather than less, gives homogenous time slots between different messages 3. Indeed, a programme starting at 20h40 for example and finishing at 22h30 is considered to belong to the same time slot as a programme starting at 20h50 and ending at 22h20. Furthermore, a 30-minute time slot, or even a 40-minute time slot in an alternative embodiment, corresponds to a minimum duration of certain programs such as televised newscasts for example.

The method of the invention is a method for learning a sociocultural profile of a user inasmuch as a value of the criterion in the field 32 is weighted as a function of the number of messages 3 selected since an initialisation of the television set 1, a qualification of these messages by the device 25 leading to this criterion in this field 31. An initialisation of the television set 1 corresponds to an effective starting for the first time of this television set. In one variant, a key is provided on the keyboard 26 and/or on the remote control unit 27 for the destruction of the list 30 and/or a volatile type of back-up memory is used. Thus, as the selection operations are done one after the other, each weighting coefficient associated with a criterion is refined by an updating and/or the list 20 is enhanced. Indeed, at each new message 3 selected, the device 25 performs a qualification. If a qualification leads to a criterion not present in the list 30, then an additional line 33 is created in the list 30 with which a criterion, a weighting coefficient and a time slot are associated.

Among the messages 3 received by the television set 1, at least one message 3 corresponds to a comprehensive menu message. This comprehensive menu pertains to broadcasting schedules for the different messages 3 that have been transmitted or are to be transmitted. This comprehensive menu has the function, when it is displayed on the screen 2, of identifying the type of message that is or will be broadcast, one or more broadcasting schedules as well as one or more associated channels. With the method of the invention, a customized menu is produced. For this

purpose, the microprocessor 16 permits the display, on the screen 2, of only types of programs for which a qualification by the device 25 leads to a criterion present in the list 30. If this is not the case, this programme will not be displayed on the screen 2. This makes it possible to lighten and simplify the menu displayed on the screen 2 and therefore to make it easier to view. Thus, a customized menu is displayed on the screen 2 as a replacement of the comprehensive menu. In a preferred example, the television set 1 has a back-up memory 38 for saving the comprehensive menu. The memory 38 may be a part of the memory 29.

In a preferred variant, the user is left the possibility of choosing an arrangement of a set of contents to be displayed from the customized menu. For this purpose, the user selects one or more parameters of identification or again identifiers such as the number of the channel, the type, the period, and/or the time. A combination of identification parameters of this kind gives an indication of the order and the way in which the search for information to be placed in the customized menu must be conducted. For example, if the elements chosen by the user as identifiers are the type of message that he seeks to view and the number of the channel on which he wishes to view it, then the customized menu prepared and displayed will enable the viewing of all the time slots in which the messages corresponding to a preferred type and to a preferred channel, determined with the criteria of the list 30, are to be broadcast.

In a preferred example, the invention fixes a default arrangement of a set of contents to be displayed of the customized menu. For the default arrangement, a combination between a type of message 3 and a time slot is used. Thus, by default, the method of the invention produces a customized menu by making a search, in the comprehensive menu, for all the channel numbers that broadcast a type of message that is most frequently watched during a time slot in which there is the most frequent viewing, and the operation is repeated for each different associated type present in the filtering list 30.

In a preferred example, a second list 39 is produced in the memory 29 on the model of the list 30, namely with lines 40 such as the lines 33 as well as, for one line, fields 41, 42 and 43 such as the fields 31, 32 and 34 respectively. One difference between the list 39 and the list 30 lies in the

contents of a field 31 or 41. In the field 31, a criterion pertaining to a channel number is placed whereas, in the field 41, the criterion pertaining to a type of message is placed. Thus, depending on the arrangement chosen by the user of the personalized menu, the microprocessor 16, to obtain this
 5 arrangement, selects the list 30 or the list 39. If the user chooses to make a search from a combination between a channel number and a time slot, then the microprocessor 16 selects the list 30. If the user makes a search from a combination between a type of programme and a time slot, then the selected list corresponds to the list 39.

10 In one variant, the user is permitted to choose a number of criteria in the list 30 or 39 so as to thus be able to increase or reduce the quantity of information present in the customized menu.

To permit the user either to modify a number of criteria or choose identification parameters to adjust an arrangement of the customized menu,
 15 labels enabling access to these setting functions are added to the television set 1 control and setting menu. It is possible to add a label enabling access to a function of choosing between a display of the contents of the customized menu and a display of the contents of the comprehensive menu memorised in the memory 38. These different labels are managed especially by the
 20 microprocessor 1 with the programme 18.

In one variant, a filtering is carried out by using an additional list complementary to the list 30 and/or to the list 39. A complement to a list 30 or 39 is obtained by searching for the information, in a comprehensive menu, that does not meet one of the qualifications of the list 30 or of the list 39.
 25 Thus, a user can view a menu that shows him types of programs that he is not in the habit of watching.

In a preferred alternative embodiment, the television set 1 is provided with programming means 60. These means 60 place a television set 1 off standby at a given date and time after it has been placed on standby. When
 30 it is placed off standby, the receiver 12 is set to display a programme proposed at this date and time in the customized menu.

This operation of placing the device off standby may be automatic. In other words, once the date and time is stored on command by the user, for example in a memory of the means 60, the means 60 by itself will activate
 35 the off standby state of the television set 1 at the appointed date and time.

However, this operation of placing the device off standby may be done at the user's request after the transmission of an alarm message. This alarm message may be a visual message displayed on the screen 2, a pre-recorded sound message or else a combination of the two.

5 In a preferred alternative, or in another alternative, the television set 1 is provided with a back-up device 61 for the contents of a programme received by the television set 1. This device 61 may be a video tape recorder or in a preferred example a back-up memory in the television set 1. Furthermore, the television set is provided with a means to control a
10 recording, in the device 61, of a programme received in the television set. This control means, in a preferred example, is the microprocessor 16 controlled by the programme 8.

 Thus, this control means is adjusted so that, automatically or on request, after a transmission of an alarm message such as the one used for
15 the off standby operation, it activates a recording of a program. This program, selected in the customized menu in a given time slot, is a starting programme when the television set is in a standby state or when a programme viewed during this given time slot is different from the programme selected in the customized menu.

20 In this preferred variant, or in another variant, the receiver 12 is adjusted so that, on the screen 2, automatically or on request, after a transmission of an alarm message such for the one for the off standby operation, there is a display of the contents of a programme proposed in the customized menu. This proposed programme is a programme that starts
25 while a programme displayed during one and the same time slot is absent from the customized menu. The viewed programme is a programme of the customized menu but it is associated with a lower weighting coefficient than that of the proposed program.

 The invention can be implemented in the context of a programme for
30 which several possibilities are offered. Indeed, it is possible to produce a film that can end in two possible ways. In this case, it is up to the user to choose the type of ending that he prefers. With the invention, the ending of a programme is chosen automatically by using the user profile set up by the television set 1 as a function of the type of programs that he watches. For
35 example, if the user is watching chiefly drama type films, the television set

will choose a dramatic ending. However, if the type of ending does not exist, then he will choose the ending that corresponds to the type of film most frequently watched after dramatic films and so on.

5 The various functions of the invention or its variants are accessed by means of a scrolling control menu not shown, this menu possibly being possibly controlled by a remote control unit.

Figure 3 gives a view, in the form of an algorithm, of an exemplary operation of the method of the invention. In a step 44, a message 3
10 pertaining to a comprehensive menu is received and stored in the memory 38. The execution of the step 44 in the algorithm of Figure 3 is free. Indeed, operations for updating the criteria may very well be done without in any way having a comprehensive menu present in the memory 38. This is why it may be considered that a beginning of the algorithm showing an operation of the method of the invention starts with a step 45 for awaiting a selection of a
15 message 3 by means of the keyboard 26 or the remote control 27. In the case of a selection of a message 3, an identification step 46 is then begun. In this step 46, the selected message 3 is identified by the device 25. Once identified, or qualified, the device 25 produces a criterion in a step 47. Indeed, the device 25 produces several criteria for one and the same
20 message 3. In one example, the device 25 produces a criterion pertaining to a channel number and a criterion pertaining to a selected type of message 3. The criteria are placed, in a step 48, in a filtering list 30 or 39. If the criterion is already in the list 30 or 39, then the microprocessor 16 updates a waiting coefficient of this criterion. In a preferred example, this updating consists of
25 an incrementation of a value of the criterion. If the criterion is absent from the list 30 or 39, then a new criterion is inserted into the list 30 or 39. There are as many new criteria inserted as there are possible lines in the list 30 or 39. In one default configuration, about ten lines of criteria are authorized per filtering list 30 or 39.

30 In one variant, a line comprising a criterion that has not been updated for more than 30 days for example is eliminated. Indeed, a criterion that has not been updated for more than 30 days signifies that no message 3, for which an identification leads to a criterion of this kind, has been selected by the user. A duration of 30 days is taken to take account of any messages 3
35 that may be broadcast on a monthly basis. It is quite possible to envisage

reducing or increasing this duration to take account, in the latter case, of two-monthly information messages for example.

The steps 46 to 48 like the step 44 do not have any fixed position in the algorithm of Figure 3. Thus, there is a waiting step 49 during which there is a wait for a request by the user for a display of the menu. Should a request be made by the user, either by pressing a key of the keyboard 26 or by pressing a key of the remote control unit 27, then a customized menu is produced in a step 50 by using the list 39 which corresponds to the default list, unless the user has selected a combination of identifiers for which it is the list 30 that must be used.

Furthermore, when a user presses a key of the keyboard 26 or of the remote control unit 27, he selects a station. A station is a name associated with a channel number. This name designates a broadcaster 7 or 8 using the channel number to send messages 3 produced by this broadcaster 7 or 8. The remote control unit 27 has keys associated with the accessible stations.

With this list 39, all the channels that broadcast preferred types of messages during preferred time slots are viewed on the screen 2, once the customized menu is displayed in a step 51. It is possible to display stations rather than channels. In one variant, it is possible to save a set of contents of the customized menu, in the memory 38 for example. In fact, it is possible to implement the method of the invention on the basis of two methods, one represented by a first algorithm and the other by a second algorithm. The first algorithm would comprise the steps 45 to 48 and the second algorithm would comprise the steps 49 to 51. The step 44 would preferably be carried out at least once before the step 49.

Should the television set 1 process only signals in analog form, then the messages 3 received are made up of analog signals. A qualification of such messages 3 can be done only very roughly. Indeed, in a preferred example and on the basis of a received message 3, an information element is produced relating to a channel number for the broadcasting of this message 3. It is also possible to produce a clock information element by means of the clock 35 in particular. These information elements are produced in a preferred example by the measurement device 25 which communicates with the receiver 12 and the clock 35.

With analog messages 3, the invention produces only a list 30 comprising a list of preferred channel numbers, namely the most frequently selected channel numbers. Thus, when a user activates the television set 1 at a certain time, the receiver 12 is automatically set with the channel number most usually selected during the time slot in which this certain time is contained. For this purpose, the device 25 measures a piece of information concerning a starting time and an ending time of the time slot in which this certain time is contained by using the contents of the registers 36 and 37 respectively. With this time slot, a search is made in the list 30 for the channel number most frequently selected during this time slot. Then, the receiver 12 is set with this channel number. All the actions performed are done under the control of the programme 18 and the microprocessor 16.

In the prior art, a scan key is pressed to select a following station by an incrementation in the value of the channel number associated with the current station. With such incrementation steps, all the accessible stations are reviewed with the television set 1.

In the invention, a scan method uses the same principle as in the prior art. However, with the method of the invention, among all the accessible stations, only those stations that have an associated channel number present in the list 30 are reviewed. In a preferred embodiment, the channel numbers are selected according to a decreasing value of the respective weighting coefficients. However, it is possible to classify the channel numbers according to a rising order or descending order of the values of channel numbers.

It is also possible as in the case of digital signals to produce and display a customized menu. However, this customized menu is simplified since it only shows information indicating the preferred channel number during a preferred time slot. Furthermore, the comprehensive menu is received in the television set 1 but is not saved since the television set 1 in this case processes only analog signals. Now the comprehensive menu is a digital information element. It is possible, in the case of analog signals, to consider eliminating the display of such a menu.

In fact, the application of the method of the invention to a television set 1 processing analog signals amounts to the use of an elementary version of the method of the invention. More specifically, an elementary version

entails carrying out a quantification that provides chiefly knowledge of the channel number selected and possibly a time at which a station is selected. In this elementary version therefore, it is chiefly the list 30 that is used. Finally, in this elementary version and in a preferred example, no menu is displayed on the screen 2 of the television set 1, it being known that it is possible to display a customized menu showing the preferred time slots and the preferred channel numbers during these time slots.

CLAIMS

1. Television set (1) receiving information messages (3) to be viewed that are individually identifiable by an identifier and receiving a
 5 comprehensive menu message to be viewed pertaining to time schedules for the broadcasting of an information message (3), characterized in that it comprises a device (12) for the identification of an information message (3) selected by a user, a device (25) to measure a sociocultural profile of the user by audience rating measurement on the basis of a reading of the
 10 contents of the identifier of each selected message (3), and in that it comprises a back-up memory (29) for a filtering list (30, 39), whose length is variable on request, corresponding to this profile and enabling a preferred menu to be prepared from the comprehensive menu in choosing only time schedules for broadcasting information messages, one type of which
 15 corresponds to the user's sociocultural profile.

2. Method for the management of a display on a screen (2) of a television set (1), wherein :

- a multitude of messages (3) to be displayed is received in the television set (1), these messages being possibly individually identifiable by
 20 an identifier,

- at least one message corresponding to a comprehensive menu is displayed, this comprehensive menu comprising information on broadcasting characteristics of a message (3) to be viewed,

characterized in that:

25 - a message (3) to be viewed is selected,

- a qualification of the selected message (3) is produced, the qualification being done by means of a set of contents of the identifier and/or a time schedule information element and/or a channel number by means of which the selection message is broadcast and/or an information element
 30 contained in the selected message,

- a filtering list (30, 39) comprising one or more qualifications is saved in a back-up memory (29), each qualification being associated with a weighting coefficient, a number of qualifications in the filtering list being adjustable on request,

35 - a qualification is weighted as a function of a number of selected

messages (3) possessing this qualification,

- a customised menu is produced, preferably from the comprehensive menu, in selecting indications, possibly corresponding to an identifier, whose contents meet a qualification of the filtering list (30, 39),

5 - the customized menu is displayed on the screen (2) of the television set (1) as a replacement of the comprehensive menu.

3. Method according to claim 2, characterized in that :

- a set of contents of the comprehensive memory is saved in a back-up memory (38).

10 4. Method according to claim 2 or 3, characterized in that :

- the filtering list (30, 39) and/or a weighting of a qualification are updated after each new selection of a message (3) to be viewed.

5. A method according to one of the claims 2 to 4, characterized in that :

15 - one or more parameters for the identification of a message are selected, an identification parameter corresponding to an identifier, and an arrangement of a set of contents to be displayed of the customised menu is adjusted as a function of at least one qualification obtained from an identifier.

20 6. A method according to one of the claims 2 to 5, characterized in that :

- a set of contents of the customised menu or a set of contents of the comprehensive menu is displayed on request.

7. A method according to one of the claims 2 to 6, characterized in that :

25 - a filtering is done by using a list complementary to the filtering list (30, 39).

8. A method according to one of the claims 2 to 7, characterized in that :

30 - the television set (1) is provided with a programming means (60) to put the television set (1) in an off standby state, after it has been put on standby, automatically or on request after a transmission of an alarm message, at a given date and time, a programme displayed on the screen (2) of the television set (1) corresponding to a programme proposed in the customised menu.

35 9. A method according to one of the claims 2 to 8, characterized in

that :

- the television set (1) is provided with a back-up device (61) for saving a set of contents of a programme received by the television set (1).

5 - the television set (1) is provided with a means to control a recording, in the back-up device (61), of a programme received in the television set (1).

10 10 . Method according to claim 9, characterized in that :

10 - the control means is set so that it automatically or on request, after a sending of an alarm message, activates a recording of a programme starting during a given time slot depending on the contents of the filtering list (30, 39) when the television set (1) is in a standby state or when a programme viewed during this given time slot is different from a programme proposed in the customised menu.

11. A method according to one of the claims 2 to 10, characterized in that :

15 the receiver (12) of the television set (1) is set so as to send, to the screen (2), automatically or on request, after a transmission or an alarm message, a set of contents of a programme proposed in the starting customised menu while a programme viewed, during one and the same time slot, is absent from the customised menu or is associated with a weighting coefficient smaller than that of the proposed programme.

20 12. A use of the method according to one of the claims 2 to 11 in a television set (1) processing information elements in analog form.

13. Television set receiving information messages substantially as hereinbefore described with reference to Figure 1 of the drawings.

25 14. Method for the management of a display on a screen of a television set substantially as hereinbefore described with references to the drawings.

30 15. A use of the method for the management of a display on a screen (2) of a television set substantially as hereinbefore described with reference to the accompanying drawings.



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Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

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Other: Online: EPODOC, WPI, PAJ.

Documents considered to be relevant:

Category	Identity of document and relevant passage	Relevant to claims
X,P	GB 2343076 A (SONY) (see page 10 line 23 - page 11 line 13 in particular)	1 at least
X	GB 2325537 A (MICROSOFT) (see page 23 line 24 - page 24 line 15 and page 25 lines 3-8 in particular)	1-6 & 9 at least
X	WO 99/01984 A1 (NDS LTD) (see page 4 para. 2 and 3)	1-6 & 9 at least
X	WO 98/21877 A2 (HYUNDAI) (see whole document, and page 5 line 22 - page 6 line 4 and page 8 lines 30-37 in particular)	1-6 & 9 at least

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.